

Social Benefits of Space Spin-Offs

An Introduction

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Innovative Partnerships Program

Overview

- Defining technology transfer
- What is involved
- Sample success stories
- Summary of benefits
- Introductions



What Is Technology Transfer?



- **Spin-Out/Off:** Finding new applications for NASA innovations (agriculture, energy, manufacturing, medicine, etc.)
 - Increases space program benefits
 - Helps U.S. businesses be successful
 - Improves quality of life and public health

NASA

Innovative Partnerships Program

What Is Technology Transfer?

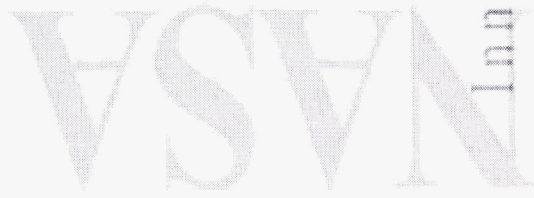


- **Spin-Out/Off:** Finding new applications for NASA innovations (agriculture, energy, manufacturing, medicine, etc.)
- **Spin-In:** Using outside innovations to help solve NASA problems
 - Saves NASA money (buying vs. inventing)
 - Achieves space program goals faster
 - Provides access to expensive equipment/facilities

Making Tech Transfer Happen



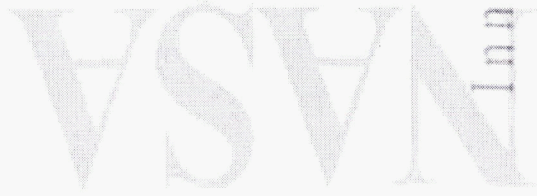
- Evaluate NASA technologies/needs
 - Collect New Technology Reports (NTRs)
 - Gather needs info from researchers
 - Conduct staged review process to keep costs down
 - Perform market-based analyzes and prioritize opportunities



Making Tech Transfer Happen



- Evaluate NASA technologies/needs
- Find partners
 - Target and contact organizations that best fit technology/need
 - Attend/Host trade shows, conferences, and workshops
 - Distribute promotional materials (brochures, videos, news/ magazine articles)
 - Facilitate interactions between innovator and partner



Making Tech Transfer Happen



- Evaluate NASA technologies/needs
- Find partners
- Negotiate agreements
 - Vet interested parties to verify ability to partner with NASA
 - Develop business terms favorable to NASA and the partner
 - Work with Office of Patent Counsel and General Counsel

Making Tech Transfer Happen

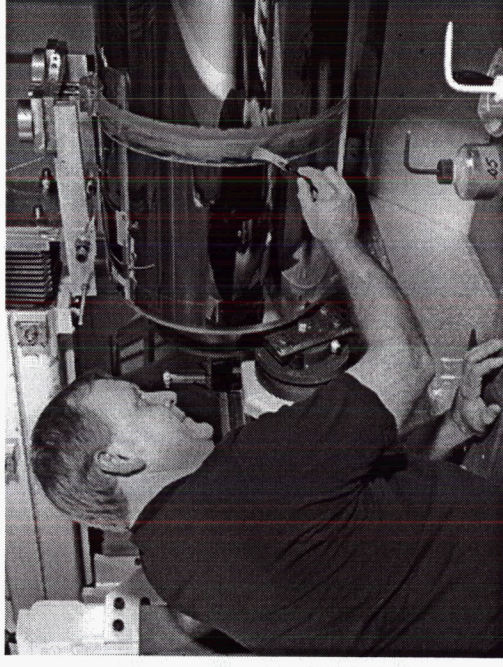


- Evaluate NASA technologies/needs
- Find partners
- Negotiate agreements
- Pursue awards
 - From NASA
 - From other organizations
 - Federal Laboratory Consortium for Technology Transfer
 - *R&D Magazine*
 - Space Technology Hall of Fame



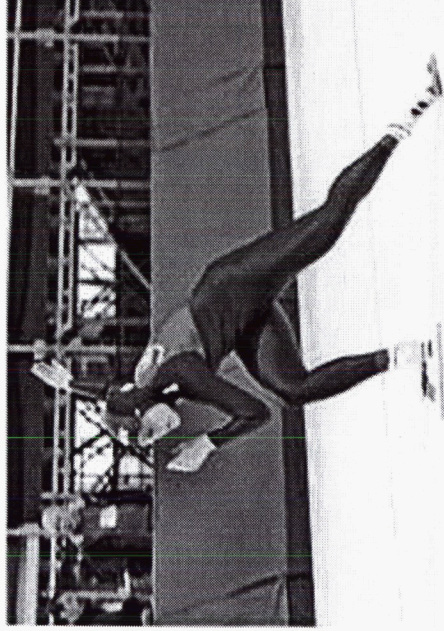
Recent Goddard Successes

NASA Technology:
Techniques for
polishing telescope
optics



New Use:

Tool for polishing
speedskates, used at
the Olympics



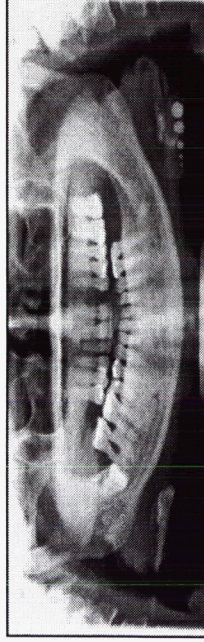


Recent Goddard Successes

NASA

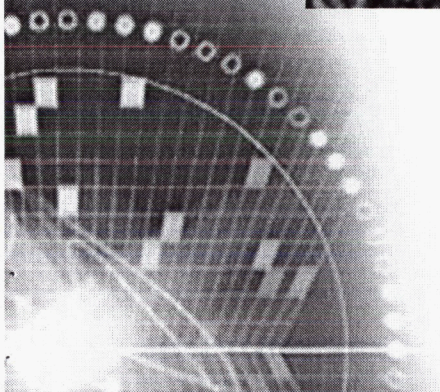
Technology:

Image analysis
software for Earth
Science research

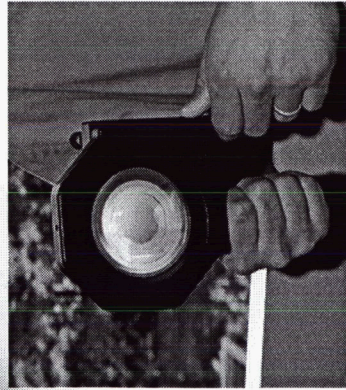


New Use:

Device for analyzing
medical X-rays



Recent Goddard Successes



NASA Technology:
Optical element for
Doppler lidar systems
(light-based radar)

New Use:
Real-time monitoring
of drinking water
supplies

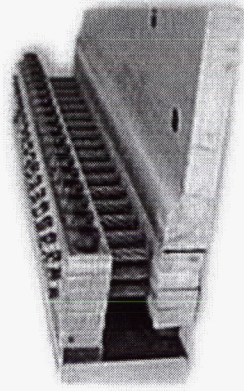


Innovative Partnerships Program

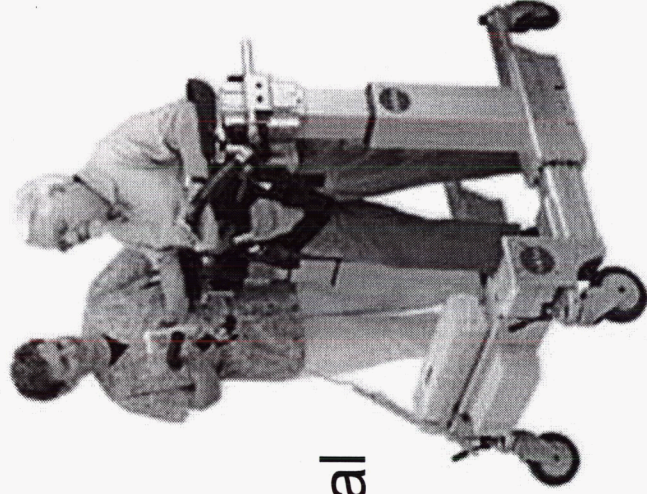


Recent Goddard Successes

NASA Technology:
Connector/Joint
technology for
sounding rockets

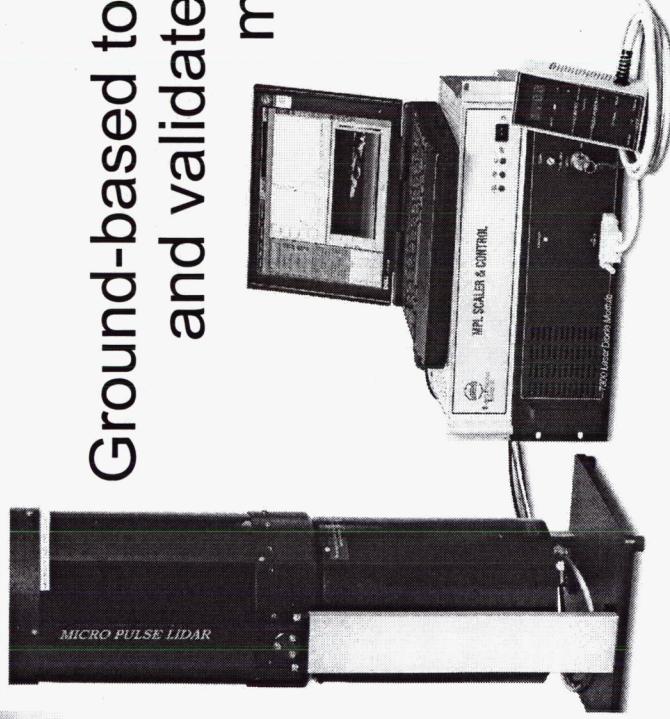


New Use:
Walker for physical
therapy/rehab

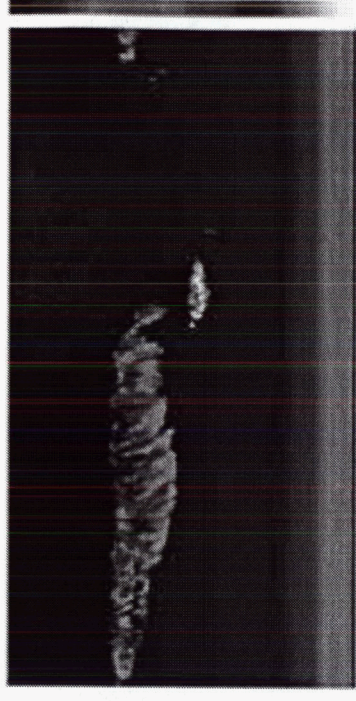


Recent Goddard Successes

NASA Need:
Ground-based tool to calibrate
and validate satellite lidar
measurements



New Use:
Network of devices for conducting
global and regional climate research



Summary of Benefits

Space spin-outs (and spin-ins)...

- Enhance public health, improves products, etc.
- Facilitate U.S. economic development
- Promote efficient use of taxpayer funds
- Accelerate achievement of NASA's scientific goals

